

35.C11969 REI.

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue Application of:

Examiner: L. Alejandro

NOBUMASA SUZUKI

Previous

Patent No.: 5,803,975

Filed: Herewith

Issued: September 8, 1998

For: MICROWAVE PLASMA

PROCESSING APPARATUS
AND METHOD THEREFOR

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BOX REISSUE

Commissioner for Patents Washington, D.C. 20231

INFORMATION DISCLOSURE STATEMENT

Sir:

In compliance with the duty of disclosure under 37 C.F.R. § 1.56 and in accordance with the practice under 37 C.F.R. §§ 1.97 and 1.98, the Examiner's attention is directed to the documents listed on the enclosed Form PTO-1449. Copies of the listed documents are also enclosed.

These documents are submitted for consideration in conjunction with a simultaneously filed reissue application for U.S. Patent 5,803,975.

The concise explanation of relevance for the non-English documents may be found in the accompanying English translations and abstracts.

More specifically, an English translation has been provided for JP 7-90591. A certified copy of this translation will be forwarded to the Examiner after it has been received by the undersigned and an application number is provided for this reissue application.

According to Applicant, Japanese Patent Publication 5-44798 discloses a microwave plasma processing apparatus having a metal container 3 consisting of an upper chamber 5 and a lower chamber (plasma generation chamber) 7 separated from each other by a quartz glass plate 4. The upper chamber 5 communicates with a waveguide 2 connected to a microwave oscillator 1. A dielectric layer 6 for guiding microwaves is provided on the upper wall surface inside the upper chamber 5 and at the communicating portion between the upper chamber 5 and the waveguide 2 to enable uniform generation of a plasma over a large area. However, the relationship between parameters characteristic of an endless annular waveguide or the use of a slotted waveguide are not disclosed.

According to Applicant, Japanese Patent Application Laid-Open No. 5-62796 discloses filling with a dielectric material 13 a microwaveguide 14 surrounding a plasma generation chamber 11 formed of a microwave transmissive material in order to generate a plasma of a uniform density, but does not disclose the relationship between parameters characteristic of an endless annular waveguide or the use of a slotted waveguide.

According to Applicant, Japanese Patent Application Laid-Open No. 7-263186 discloses filling a waveguide 5a, 5b, 5c with a dielectric material 9 but does not disclose the relationship between parameters characteristic of an endless annular waveguide.

It is noted that the cited U.S. Patent 5,538,699 is a U.S. counterpart to JP 5-345982 which was cited in the original prosecution.

CONCLUSION

It is respectfully requested that the above information be considered by the Examiner and that a copy of the enclosed Form PTO-1449 be returned indicating that such information has been considered.

Applicant's undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. correspondence should continue to be directed to our address given below.

Respectfully submitted,

Registration No.

ney for Applic

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